



ISOTOPIC NATURAL GAS ANALYSIS

PRIMARY DB KEY: **05-045-18087** NAME/DESCRIP : **110180057 596-29C 21**
 LEASE #: **CASING**
 FIELD/AREA:

PROJECT NO. : **202502080** ANALYSIS NO. : **04**
 COMPANY NAME : **QB ENERGY OPERATING, LLC** ANALYSIS DATE: **MARCH 03, 2025 17:35**
 OFFICE / BRANCH: **PARACHUTE, CO** SAMPLE DATE : **FEBRUARY 18, 2025**
 CUSTOMER REF: **TO:**
 PRODUCER : **QB ENERGY OPERATING, LLC** EFFECTIVE DATE:

*****FIELD DATA*****

SAMPLE CYCLE: SAMPLE TYPE: **SPOT**
 SAMPLE PRES. : **331** psig PROBE : **NO**
 FLOW PRES. : psig CYLINDER NO. : **ECA-742**
 LAB PRES: psig SAMPLED BY : **MIKE KELLEY**
 SAMPLE TEMP. : **33** °f SAMPLING COMPANY: **QB ENERGY**
 AMBIENT TEMP.: °f H2S BY STAIN TUBE: - ppm mol
 H2O BY STAIN TUBE: - #/mmcf CO2 BY STAIN TUBE: - Mol %
 FIELD COMMENTS:
 LAB COMMENTS:

COMPONENTS	NORM. MOLE%	GPM @ 14.65	d13C ‰ VPDB	dD ‰ VSMOW
HELIUM	0.00	-	-	-
HYDROGEN	1.20	-	-	-
OXYGEN/ARGON	0.00	-	-	-
NITROGEN	0.06	-	-	-
CO2	4.13	-	-4.5	-
METHANE	87.19	-	-36.5	-191
ETHANE	5.00	1.3380	-25.8	-
PROPANE	1.16	0.3218	-23.2	-
ISOBUTANE	0.31	0.1009	-23.1	-
N-BUTANE	0.52	0.0719	-22.5	-
ISOPENTANE	0.14	0.0510	-23.0	-
N-PENTANE	0.07	0.0250	-23.4	-
HEXANES+	0.23	0.0949	-	-
TOTAL	100.00	2.0035		

BTU @ 60 DEG F

14.65
 GROSS DRY REAL = **1041.6** /scf
 GROSS SATURATED REAL = **1023.4** /scf

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) 0.6418
 GRAVITY (LB/SCF) 0.04898
 COMPRESSIBILITY FACTOR : 0.99760

NOTE: REFERENCE GPA 2261(ASTM D1945 & ASME-PTC), 2145, & 2172 CURRENT PUBLICATIONS

Reference: Per GPA 2172-14 sec 9 **The C6+ is derived from the following ratios of C6, C7 & C8+ respectively: 60% 30% 10%**

The NG Composition File #: **202502080-04-A-359**
 The Isotopic Data File #: **DIG-039057**

Note: Stable isotope results based on multi-point laboratory calibration

Precision δ¹³C < 0.5 ‰ Precision δD < 5.0 ‰

Values in red represent low peak heights. Interpret with caution.

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